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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 12

Complete If Known

Application Number	09/646,353
Filing Date	November 27, 2000
First Named Inventor	Choo, Yen et al.
Art Unit	1639
Examiner Name	Teresa D. Wessendorf
Attorney Docket Number	019496-006700US

U.S. PATENT DOCUMENTS

Examiner	Cite No. ¹	Document Number Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
T.W.	AA	6,013,453	01-11-2000	Choo et al.	
	AB	6,007,988	12-28-1999	Choo et al.	
	AC	6,001,885	12-14-1999	Vega et al.	
	AD	5,972,615	10-26-1999	An et al.	
	AE	5,939,538	08-17-1999	Leavitt et al.	
	AF	5,916,794	06-29-1999	Chandrasegaran	
	AG	5,871,907	02-16-1999	Winter et al.	
	AH	5,871,902	02-16-1999	Weininger et al.	
	AI	5,869,618	02-09-1999	Lippman et al.	
	AJ	5,792,640	08-11-1998	Chandrasegaran	
	AK	5,789,538	08-04-1998	Rebar et al.	
	AL	5,702,914	12-30-1997	Evans et al.	
	AM	5,674,738	10-07-1997	Abramson et al.	
	AN	5,639,592	06-17-1997	Evans et al.	
	AO	5,597,693	01-28-1997	Evans et al.	
	AP	5,578,483	11-26-1996	Evans et al.	
	AQ	5,498,530	03-12-1996	Schatz et al.	
	AR	5,487,994	01-30-1996	Chandrasegaran	
	AS	5,436,150	07-25-1995	Chandrasegaran	
	AT	5,403,484	04-04-1995	Ladner et al.	
	AU	5,376,530	12-27-1994	De The et al.	
	AV	5,356,802	10-18-1994	Chandrasegaran	
	AW	5,350,840	09-27-1994	Call et al.	
	AX	5,348,864	09-20-1994	Barbacid	
	AY	5,340,739	08-23-1994	Stevens et al.	
	AZ	5,324,819	06-28-1994	Oppermann et al.	
	BA	5,324,818	06-28-1994	Nabel et al.	
	BB	5,324,638	06-28-1994	Tao et al.	
	BC	5,302,519	04-12-1994	Blackwood et al.	
	BD	5,243,041	09-07-1993	Fernandez-Pol	
	BE	5,223,409	06-29-1993	Ladner et al.	
	BF	5,198,346	03-30-1993	Ladner et al.	
	BG	5,096,815	03-17-1992	Ladner et al.	

Examiner
Signature

T.D. W.

Date
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9/13/04

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet

2

of

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Art Unit	1639
Examiner Name	Teresa D. Wessendorf
Attorney Docket Number	019496-006700US

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	BH	5,096,814	03-17-1992	Aivasidis et al.	
	BI	4,990,607	02-05-1991	Katagiri et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁴
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)			
✓	BJ	WO	00/27878		05-18-2000	~	<input type="checkbox"/>
	BK	WO	00/23464		04-27-2000		<input type="checkbox"/>
	BL	WO	99/48909		09-30-1999		<input type="checkbox"/>
	BM	WO	99/47656		09-23-1999		<input type="checkbox"/>
	BN	WO	99/45132		09-10-1999		<input type="checkbox"/>
	BO	WO	99/42474		08-26-1999		<input type="checkbox"/>
	BP	WO	99/41371		08-19-1999		<input type="checkbox"/>
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	BS	WO	97/27213		07-31-1997		<input type="checkbox"/>
	BT	WO	97/27212		07-31-1997		<input type="checkbox"/>
	BU	WO	96/32475		10-17-1996		<input type="checkbox"/>
	BV	WO	96/20951		07-11-1996		<input type="checkbox"/>
	BW	WO	96/11267		04-08-1996		<input type="checkbox"/>
↓	BX	WO	96/06110		02-29-1996		<input type="checkbox"/>
↓	BY	WO	95/19431		07-25-1995	↓	↓
NO ENGLISH TRANSLATION	LBZ	EP	875 567		04-11-1998		abst only

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Examiner Signature	<i>Terry D. Wessendorf</i>	Date Considered	<i>9/13/00</i>
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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
TDW	CA	Agarwal et al., "Stimulation of Transcript Elongation Requires both the Zinc Finger and RNA Polymerase II Binding Domains of Human TFIIS," <u>Biochemistry</u> , 30(31):7842-7851 (1991).	
	CB	Anato et al., "A thermodynamic study of unusually stable RNA and DNA hairpins," <u>Nuc. Acids. Res.</u> , 19(21):5901-5905 (1991).	
	CC	Barbas, C. F., "Recent advances in phage display," <u>Curr. Opin. Biotech.</u> , 4:526-530 (1993).	
	CD	Barbas et al., "Assembly of combinatorial antibody libraries on phage surfaces: The gene III site," <u>PNAS</u> , 88:7978-7982 (1991).	
	CE	Barbas et al., "Semisynthetic combinatorial antibody libraries: A chemical solution to the diversity problem," <u>PNAS</u> , 89:4457-4461 (1992).	
	CF	Beerli et al., "Toward controlling gene expression at will: Specific regulation of the erbB-2/HER-2 promoter by using polydactyl zinc finger proteins constructed from modular building blocks," <u>PNAS</u> , 95:14628-14633 (1998).	
	CG	Bellefroid et al., "Clustered organization of homologous KRAB zinc-finger genes with enhanced expression in human T lymphoid cells," <u>EMBO J.</u> , 12(4):1363-1374 (1993).	
	CH	Berg, J. M., "DNA Binding Specificity of Steroid Receptors," <u>Cell</u> , 57:1065-1068 (1989).	
	CI	Berg, J. M., "Sp1 and the subfamily of zinc finger proteins with guanine-rich binding sites," <u>PNAS</u> , 89:11109-11110 (1992).	
	CJ	Berg et al., "The Galvanization of Biology: A Growing Appreciation for the Roles of Zinc," <u>Science</u> , 271:1081-1085 (1996).	
	CK	Berg, J.M., "Letting your fingers do the walking," <u>Nature Biotechnology</u> , 15:323 (1997).	
	CL	Bergqvist et al., "Loss of DNA-binding and new transcriptional <i>trans</i> -activation function in polyomavirus large T-antigen with mutation of zinc finger motif," <u>Nuc. Acids Res.</u> , 18(9):2715-2720 (1990).	
	CM	Blaese et al., "Vectors in cancer therapy: how will they deliver?," <u>Cancer Gene Therapy</u> , 2(4):291-297 (1995).	
✓	CN	Caponigro et al., "Transdominant genetic analysis of a growth control pathway," <u>PNAS</u> , 95:7508-7513 (1998)	

Examiner Signature	T.D. Wessendorf	Date Considered	9/13/04
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Sheet

4

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Complete if Known	
Application Number	09/646,353
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First Named Inventor	Choo, Yen et al.
Art Unit	1639
Examiner Name	Teresa D. Wessendorf
Attorney Docket Number	019496-006700US

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OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
TDW	CO	Celenza et al., "A Yeast Gene That Is Essential for Release from Glucose Repression Encodes a Protein Kinase," <u>Science</u> , 233:1175-1180 (1986).	
	CP	Cheng et al., "Identification of Potential Target Genes for Adr1p through Characterization of Essential Nucleotides in UAS1," <u>Mol. Cellular Biol.</u> , 14(6):3842-3852 (1994).	
	CQ	Cheng et al., "A Single Amino Acid substitution in Zinc Finger 2 of Adr1p Changes its Binding Specificity at two Positions in UAS1," <u>J. Mol. Biol.</u> , 251:1-8 (1995)	
	CR	Choo et al., "A role in DNA binding for the linker sequences of the first three zinc fingers of TFIIB," <u>Nuc. Acids Res.</u> , 21(15):3341-3346 (1993).	
	CS	Choo et al., "All wrapped up," <u>Nature Structural Biology</u> , 5(4):253-255 (1998).	
	CT	Choo et al., "Designing DNA-binding proteins on the surface of filamentous phage," <u>Curr. Opin. Biotechnology</u> , 6:431-436 (1995).	
	CU	Choo, Y., "End effects in DNA recognition by zinc finger arrays," <u>Nuc. Acids Res.</u> , 26(2):554-557 (1998).	
	CV	Choo et al., "In vivo repression by a site-specific DNA-binding protein designed against an oncogenic sequence," <u>Nature</u> , 372:642-645 (1994).	
	CW	Choo et al., "Promoter-specific Activation of Gene Expression Directed by Bacteriophage-selected Zinc Fingers," <u>J. Mol. Biol.</u> , 273:525-532 (1997).	
	CX	Choo et al., "Selection of DNA binding sites for zinc fingers using rationally randomized DNA reveals coded interactions," <u>PNAS</u> , 91:11168-11172 (1994)	
	CY	Choo et al., "Toward a code for the interactions of zinc fingers with DNA: Selection of randomized fingers displayed on phage," <u>PNAS</u> , 91:11163-11167 (1994).	
	CZ	Clarke et al., "Zinc Fingers in <i>Caenorhabditis elegans</i> : Finding Families and Probing Pathways," <u>Science</u> , 282:2018-2022 (1998).	
	DA	Corbi, N. et al., "Synthesis of a New Zinc Finger Peptide; Comparison of its 'Code' Deduced and 'CASTing' Derived Binding Sites," <u>FEBS Letters</u> , 417:71-74 (1997).	
	DB	Crozier et al., "Single Amino Acid Exchanges in Separate Domains of the Drosophila serendipity 8 Zinc Finger Protein Cause Embryonic and Sex Biased Lethality," <u>Genetics</u> , 131:905-916 (1992).	
✓	DC	Debs et al., "Regulation of Gene Expression <i>in Vivo</i> by Liposome-mediated Delivery of a Purified Transcription Factor," <u>J. Biological Chemistry</u> , 265(18):10189-10192 (1990).	

Examiner Signature

T. D. Y.

Date Considered

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First Named Inventor	Choo, Yen et al.
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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

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TDW	DD	Desjarlais et al., "Length-encoded multiplex binding site determination: Application to zinc-finger proteins," <i>PNAS</i> , 91:11099-11103 (1994).	
	DE	Desjarlais et al., "Use of a zinc-finger consensus sequence framework and specificity rules to design specific DNA binding proteins," <i>PNAS</i> , 90:2256-2260 (1993)	
	DF	Desjarlais et al., "Toward rules relating zinc finger protein sequences and DNA binding site preferences," <i>PNAS</i> , 89(16):7345-7349 (1992)	
	DG	Desjarlais et al., "Redesigning the DNA-Binding Specificity of a Zinc Finger Protein: A Data Base-Guided Approach," <i>Proteins: Structure, Function, and Genetics</i> , 12(2):101-104 (1992)	
	DH	Desjartais et al., "Redesigning the DNA-Binding Specificity of a Zinc-Finger Protein: A Data Base-Guided Approach," <i>Proteins: Structure, Function, and Genetics</i> , 13:272 (1992).	
	DI	DiBello et al., "The Drosophila Broad-ComplexEncodes a Family of Related Proteins Containing Zinc Fingers," <i>Genetics</i> , 129:385-397 (1991).	
	DJ	Elrod-Erickson et al., "High-resolution structures of variant Zif268-DNA complexes: implications for understanding zinc finger-DNA recognition," <i>Structure</i> , 6(4):451-464 (1998).	
	DK	Elrod-Erickson et al., "Zif268 protein-DNA complex refined at 1.6 Å: a model system for understanding zinc finger-DNA interactions," <i>Structure</i> , 4(10):1171-1180 (1996)	
	DL	Fairall et al., "The crystal structure of a two zinc-finger peptide reveals an extension to the rules for zinc-finger/DNA recognition," <i>Nature</i> , 366:483-487 (1993)	
	DM	Frankel et al., "Fingering Too Many Proteins," <i>Cell</i> , 53:675 (1988).	
	DN	Friesen et al., "Phage Display of RNA Binding Zinc Fingers from Transcription Factor IIIA*," <i>J. Biological Chem.</i> , 272(17):10994-10997 (1997).	
	DO	Friesen et al., "Specific RNA binding proteins constructed from zinc fingers," <i>Nature Structural Biology</i> , 5(7):543-546(1998).	
	DP	Ghosh, D., "A relational database of transcription factors," <i>Nuc. Acids Res.</i> , 18(7):1749-1756 (1990).	
✓	DQ	Gogos et al., "Recognition of diverse sequences by class I zinc fingers: Asymmetries and indirect effects on specificity in the interaction between CF2II and A+T-rich sequence elements," <i>PNAS</i> , 93(5):2159-2164 (1996)	

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Tdw	DR	Gossen et al., "Tight control of gene expression in mammalian cells by tetracycline-responsive promoters," <u>PNAS</u> , 89:5547-5551 (1992)	
	DS	Greisman et al., "A General Strategy for Selecting High-Affinity Zinc Finger Proteins for Diverse DNA Target Sites," <u>Science</u> , 275:657-661 (1997)	
	DT	Hamilton et al., "Comparison of the DNA Binding Characteristics of the Related Zinc Finger Proteins WT1 and EGR1," <u>Biochemistry</u> , 37:2051-2058 (1998).	
	DU	Hamilton et al., "High affinity binding sites for the Wilms' tumor suppressor protein WT1," <u>Nuc. Acids Res.</u> , 23(2):277-284 (1995).	
	DV	Hanas et al., "Internal deletion mutants of <i>Xenopus</i> transcription factor IIIA," <u>Nuc. Acids Res.</u> , 17(23):9861-9870 (1989).	
	DW	Hayes et al., "Locations of Contacts between Individual Zinc Fingers of <i>Xenopus laevis</i> Transcription Factor IIIA and the Internal Control Region of a 5S RNA Gene," <u>Biochemistry</u> , 31:11600-11605 (1992).	
	DX	Heinzel et al., "A complex containing N-CoR, mSin3 and histone deacetylase mediates transcriptional repression," <u>Nature</u> , 387:43-48 (1997).	
	DY	Hirst et al., "Discrimination of DNA response elements for thyroid hormone and estrogen is dependant on dimerization of receptor DNA binding domains," <u>PNAS</u> , 89:5527-5531 (1992).	
	DZ	Hoffman et al., "Structures of DNA-binding mutant zinc finger domains: implications for DNA binding," <u>Protein Science</u> , 2:951-965 (1993).	
	EA	Isalan et al., "Comprehensive DNA Recognition through Concerted Interactions from Adjacent Zinc Fingers," <u>Biochemistry</u> , 37:12026-12033 (1998).	
	EB	Jacobs, G. H., "Determination of the base recognition positions of zinc fingers from sequence analysis," <u>EMBO J.</u> , 11(12):4507-4517 (1992).	
	EC	Jamieson et al., "A zinc finger directory for high-affinity DNA recognition," <u>PNAS</u> , 93:12834-12839 (1996).	
	ED	Jamieson et al., "In Vitro Selection of Zinc Fingers with Altered DNA-Binding Specificity," <u>Biochemistry</u> , 33(19):5689-5695 (1994)	
↓	EE	Julian et al., "Replacement of His23 by Cys in a zinc finger of HIV-1 NCp7 led to a change in 1H NMR-derived 3D structure and to a loss of biological activity," <u>FEBS letters</u> , 331(1,2):43-48 (1993).	

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Art Unit	1639
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Attorney Docket Number	019496-006700US

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THW	EF	Kamiuchi et al., "New multi zinc finger protein: biosynthetic design and characteristics of DNA recognition," <u>Nucleic Acids Symposium Series</u> , 37:153-154 (1997).	
	EG	Kang, J.S. et al., "Zinc Finger Proteins as Designer Transcription Factors," <u>J. Biol. Chem.</u> , 275(12):8742-8748 (2000).	
	EH	Kim et al., "A 2.2 Å resolution crystal structure of a designed zinc finger protein bound to DNA," <u>Nat. Struct. Biol.</u> , 3(11):940-945 (1996)	
	EI	Kim et al., "Design of TATA box-binding protein/zinc finger fusions for targeted regulation of gene expression," <u>PNAS</u> , 94:3616-3620 (1997)	
	EJ	Kim et al., "Getting a handhold on DNA: Design of poly-zinc finger proteins with femtomolar dissociation constants," <u>PNAS</u> , 95:2812-2817 (1998).	
	EK	Kim et al., "Serine at Position 2 in the DNA Recognition helix of a Cys2-His2 Zinc finger Peptide is Not, in General, Responsible for Base Recognition," <u>J. Mol. Biol.</u> , 252:1-5 (1995).	
	EL	Kim et al., "Site-specific cleavage of DNA-RNA hybrids by zinc finger/FokI cleavage domain fusions," <u>Gene</u> , 203:43-49 (1997).	
	EM	Kim et al., "Transcriptional repression by zinc finger peptides," <u>J. Biol. Chem.</u> , 272(47):29795-28000 (1997).	
	EN	Kinzler et al., "The GLI gene is a member of the Kruppel family of zinc finger proteins," <u>Nature</u> , 332:371-4 (1988).	
	EO	Klug, A., "Gene Regulatory Proteins and Their Interaction with DNA," <u>Ann. NY Acad. Sci.</u> , 758:143-160 (1995).	
	EP	Klug et al., "Protein Motifs 5: Zinc Fingers," <u>FASEB J.</u> , 9:597-604 (1995).	
	EQ	Klug, A., "Zinc Finger Peptides for the Regulation of Gene Expression," <u>J. Mol. Biol.</u> , 293:215-218 (1999).	
	ER	Kothekar, V., "Computer simulation of zinc finger motifs from cellular nucleic acid binding protein and their interaction with consensus DNA sequences," <u>FEBS Letters</u> , 274(1-2):217-222 (1990).	
↓	ES	Kriwacki et al., "Sequence-specific recognition of DNA by zinc-finger peptides derived from the transcription factor Sp1," <u>PNAS</u> , 89:9759-9763 (1992).	

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Application Number	09/646,353
Filing Date	November 27, 2000
First Named Inventor	Choo, Yen et al.
Art Unit	1639
Examiner Name	Teresa D. Wessendorf
Attorney Docket Number	019496-006700US

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TDW	ET	Kulda et al., "The regulatory gene <i>areA</i> mediating nitrogen metabolite repression in <i>Aspergillus nidulans</i> . Mutations affecting specificity of gene activation alter a loop residue of a putative zinc finger," <i>EMBO J.</i> , 9(5):1355-1364 (1990).	
	EU	Laird-Offringa et al., "RNA-binding proteins tamed," <i>Nat. Structural Biol.</i> , 5(8):665-668 (1998).	
	EV	Liu et al., "Design of polydactyl zinc-finger proteins for unique addressing within complex genomes," <i>PNAS</i> , 94(11):5525-5530 (1997).	
	EW	Mandel-Gutfreund et al., "Quantitative parameters for amino acid-base interaction: implications for prediction of protein-DNA binding sites," <i>Nuc. Acids Res.</i> , 26(10):2306-2312 (1998).	
	EX	Margolin et al., "Kruppel-associated boxes are potent transcriptional repression domains," <i>PNAS</i> , 91:4509-4513 (1994).	
	EY	Mizushima et al., "pEF-BOS, a powerful mammalian expression vector," <i>Nuc. Acids Res.</i> , 18(17):5322 (1990).	
	EZ	Nakagama et al., "Sequence and Structural Requirements for High-Affinity DNA Binding by the WT1 Gene Product," <i>Molecular and Cellular Biology</i> , 15(3):1489-1498 (1995).	
	FA	Nardelli et al., "Zinc finger-DNA recognition: analysis of base specificity by site-directed mutagenesis," <i>Nuc. Acids Res.</i> , 20(16):4137-4144 (1992).	
	FB	Nardelli et al., "Base sequence discrimination by zinc-finger DNA-binding domains," <i>Nature</i> , 349:175-178 (1991).	
	FC	Nekludova et al., "Distinctive DNA conformation with enlarged major groove is found in Zn-finger—DNA and other protein—DNA complexes," <i>PNAS</i> , 91:6948-6952 (1994).	
	FD	Orkin et al., "Report and Recommendations of the Panel to Assess the NIH Investment in Research on Gene Therapy," December 7, 1995.	
	FE	Pabo et al., "Protein-DNA Recognition," <i>Ann. Rev. Biochem.</i> , 53:293-321 (1984).	
	FF	Pabo et al., "Systematic Analysis of Possible Hydrogen Bonds between Amino Acid Side Chains and B-form DNA," <i>J. Biomolecular Struct. Dynamics</i> , 1:1039-1049 (1983).	
↓	FG	Pabo, C. O., "Transcription Factors: Structural Families and Principles of DNA Recognition," <i>Ann. Rev. Biochem.</i> , 61:1053-1095 (1992).	

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First Named Inventor	Choo, Yen et al.
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TLW	FH	Pavletich et al., "Crystal Structure of a Five-Finger GLI-DNA Complex: New Perspectives on Zinc Fingers," <u>Science</u> , 261:1701-1707 (1993).	
	FI	Pavletich et al., "Zinc Finger-DNA Recognition: Crystal Structure of a Zif268-DNA Complex at 2.1 Å," <u>Science</u> , 252:809-817 (1991)	
	FJ	Pengue et al., "Kruppel-associated box-mediated repression of RNA polymerase II promoters is influenced by the arrangement of basal promoter elements," <u>PNAS</u> , 93:1015-1020 (1996).	
	FK	Pengue et al., "Repression of transcriptional activity at a distance by the evolutionarily conserved KRAB domain present in a subfamily of zinc finger proteins," <u>Nuc. Acids Res.</u> , 22(15):2908-2914 (1994).	
	FL	Pengue et al., "Transcriptional Silencing of Human Immunodeficiency Virus Type 1 Long Terminal Repeat-Driven Gene Expression by the Kruppel-Associated Box Repressor Domain Targeted to the Transactivating Response Element," <u>J. Virology</u> , 69(10):6577-6580 (1995).	
	FM	Pomerantz et al., "Analysis of homeodomain function by structure-based design of a transcription factor," <u>PNAS</u> , 92:9752-9756 (1995)	
	FN	Pomerantz et al., "Structure-Based Design of a Dimeric Zinc Finger Protein," <u>Biochemistry</u> , 37(4):965-970 (1998)	
	FO	Pomerantz et al., "Structure-Based Design of Transcription Factors," <u>Science</u> , 267:93-96 (1995).	
	FP	Qian et al., "Two-Dimensional NMR Studies of the Zinc Finger Motif: Solution Structures and Dynamics of Mutant ZFY Domains Containing Aromatic Substitutions in the Hydrophobic Core," <u>Biochemistry</u> , 31:7463-7476 (1992).	
	FQ	Quigley et al., "Complete Androgen Insensitivity Due to Deletion of Exon C of the Androgen Receptor Gene Highlights the Functional Importance of the Second Zinc Finger of the Androgen Receptor <i>in Vivo</i> ," <u>Molecular Endocrinology</u> , 6(7):1103-1112 (1992).	
	FR	Rauscher et al., "Binding of the Wilms' Tumor Locus Zinc Finger Protein to the EGR-1 Consensus Sequence," <u>Science</u> , 250:1259-1262 (1990).	
	FS	Ray et al., "Repressor to activator switch by mutations in the first Zn finger of the glucocorticoid receptor: Is direct DNA binding necessary?," <u>PNAS</u> , 88:7086-7090 (1991).	
▼	FT	Rebar et al., "Phage Display Methods for Selecting Zinc Finger Proteins with Novel DNA-Binding Specificities," <u>Methods in Enzymology</u> , 267:129-149 (1996).	

Examiner Signature	<i>Teresa D. Wessendorf</i>	Date Considered	2/13/04
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Application Number	09/646,353
Filing Date	November 27, 2000
First Named Inventor	Choo, Yen et al.
Art Unit	1639
Examiner Name	Teresa D. Wessendorf
Attorney Docket Number	019496-006700US

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TW	FU	Rebar et al., "Zinc Finger Phage: Affinity Selection of Fingers with New DNA-Binding Specificities," <u>Science</u> , 263:671-673 (1994)	
	FV	Reith et al., "Cloning of the major histocompatibility complex class II promoter binding protein affected in a hereditary defect in class II gene regulation," <u>PNAS</u> , 86:4200-4204 (1989).	
	FW	Rhodes et al., "Zinc Fingers: They play a key part in regulating the activity of genes in many species, from yeast to humans. Fewer than 10 years ago no one knew they existed," <u>Scientific American</u> , 268:56-65 (1993)	
	FX	Rice et al., "Inhibitors of HIV Nucleocapsid Protein Zinc Fingers as Candidates for the Treatment of AIDS," <u>Science</u> , 270:1194-1197 (1995).	
	FY	Rivera et al., "A humanized system for pharmacologic control of gene expression," <u>Nature Medicine</u> , 2(9):1028-1032 (1996)	
	FZ	Rollins et al., "Role of TFIIIA Zinc Fingers In vivo: Analysis of Single-Finger Function in Developing <i>Xenopus</i> Embryos," <u>Molecular Cellular Biology</u> , 13(8):4776-4783 (1993).	
	GA	Sadowski et al., "GAL4-VP16 is an Unusually Potent Transcriptional Activator," <u>Nature</u> , 335:563-564 (1998).	
	GB	Saleh et al., "A Novel Zinc Finger Gene on Human Chromosome 1qter That Is Alternatively Spliced in Human Tissues and Cell Lines," <u>Am. J. Hum. Genet.</u> , 52:192-203 (1993).	
	GC	Shi et al., "A direct comparison of the properties of natural and designed finger proteins," <u>Chem. & Biol.</u> , 2(2):83-89 (1995)	
	GD	Shi et al., "DNA Unwinding Induced by Zinc Finger Protein Binding," <u>Biochemistry</u> , 35:3845-3848 (1996)	
	GE	Shi et al., "Specific DNA-RNA Hybrid Binding by Zinc Finger Proteins," <u>Science</u> , 268:282-284 (1995).	
	GF	Singh et al., "Molecular Cloning of an Enhancer Binding Protein: Isolation by Screening of an Expression Library with a Recognition Site DNA," <u>Cell</u> , 52:415-423 (1988).	
	GG	Skerka et al., "Coordinate Expression and Distinct DNA-Binding Characteristics of the four EGR-Zinc Finger Proteins in Jukat T Lymphocytes," <u>Immunobiology</u> , 198:179-191 (1997).	
✓	GH	South et al., "The Nucleocapsid Protein Isolated from HIV-1 Particles Binds Zinc and Forms Retroviral-Type Zinc Fingers," <u>Biochemistry</u> , 29:7786-7789 (1990).	

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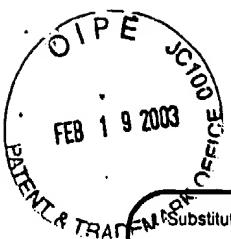
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<i>TJW</i>	GI	Suzuki et al. "DNA recognition code of transcription factors in the helix-turn-helix, probe helix, hormone receptor, and zinc finger families," <u>PNAS</u> , 91:12357-12361 (1994)	
	GJ	Suzuki et al., "Stereochemical basis of DNA recognition by Zn fingers," <u>Nuc. Acids Res.</u> , 22(16):3397-3405 (1994)	
	GK	Swirnoff et al., "DNA-Binding Specificity of NGFI-A and Related Zinc Finger Transcription Factors," <u>Mol. Cell. Biol.</u> , 15(4):2275-2287 (1995)	
	GL	Taylor et al, "Designing Zinc-Finer ADR1 Mutants with Altered Specificity of DNA Binding to T in UAS1 Sequences," <u>Biochemistry</u> , 34:3222-3230 (1995)	
	GM	Thiesen et al., "Amino Acid Substitutions in the SP1 Zinc Finger Domain Alter the DNA Binding Affinity to Cognate SP1 Target Site," <u>Biochem. Biophys. Res. Communications</u> , 175(1):333-338 (1991).	
	GN	Thiesen et al., "Determination of DNA binding specificities of mutated zinc finger domains," <u>FEBS Letters</u> , 283(1):23-26 (1991).	
	GO	Thukral et al., "Alanine scanning site-directed mutagenesis of the zinc fingers of transcription factor ADR1: Residues that contact DNA and that transactivate," <u>PNAS</u> , 88:9188-9192 (1991), + correction page.	
	GP	Thukral et al., "Localization of a Minimal Binding Domain and Activation Regions in Yeast Regulatory Protein ADR1," <u>Molecular Cellular Biology</u> , 9(6):2360-2369 (1989).	
	GQ	Thukral et al., "Mutations in the Zinc Fingers of ADR1 That Change the Specificity of DNA Binding and Transactivation," <u>Mol. Cell Biol.</u> , 12(6):2784-2792 (1992)	
	GR	Thukral et al., "Two Monomers of Yeast Transcription Factor ADR1 Bind a Palindromic Sequence Symmetrically to Activate ADH2 Expression," <u>Molecular Cellular Biol.</u> , 11(3):1566-1577 (1991).	
	GS	Vortkamp et al., "Identification of Optimized Target Sequences for the GLI3 Zinc Finger Protein," <u>DNA Cell Biol.</u> , 14(7):629-634 (1995).	
	GT	Wang, S.W. et al., "Dimerization of Zinc fingers Mediated by Peptides Evolved <i>in vitro</i> from Random Sequences," <u>PNAS</u> , 96: 9568-9573 (1999).	
	GU	Webster et al., "Conversion of the E1A Cys4 zinc finger to a nonfunctional His2, Cys2 zinc finger by a single point mutation," <u>PNAS</u> , 88:9989-9993 (1991).	
↓	GV	Whyatt et al., "The two zinc finger-like domains of GATA-1 have different DNA binding specificities," <u>EMBO J.</u> , 12(13):4993-5005 (1993).	

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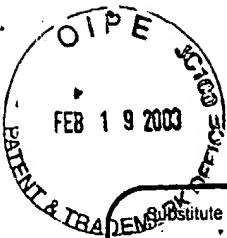
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TW	GW	Wilson et al., "In Vivo Mutational analysis of the NGFI-A Zinc Fingers," <u>J. Biol. Chem.</u> , 267(6):3718-3724 (92).
	GX	Witzgall et al., "The Kruppel-associated box-A (KRAB-A) domain of zinc finger proteins mediates transcriptional repression," <u>PNAS</u> , 91:4514-4518 (1994).
	GY	Wolfe, S.A. et al., "Analysis of Zinc Fingers Optimized via Phage Display: Evaluating the Utility of a Recognition Code," <u>J. Mol. Biol.</u> , 285:1917-1934 (1999).
	GZ	Wright et al., "Expression of a Zinc Finger Gene in HTLV-I- and HTLV-II-transformed Cells," <u>Science</u> , 248:588-591 (1990).
	HA	Wu et al., "Building zinc fingers by selection: Toward a therapeutic application," <u>PNAS</u> , 92:344-348 (1995).
	HB	Yang et al., "Surface plasmon resonance based kinetic studies of zinc finger-DNA interactions," <u>J. Immunol. Methods</u> , 183:175-182 (1995).
✓	HC	Yu et al., "A hairpin ribozyme inhibits expression of diverse strains of human immunodeficiency virus type 1," <u>PNAS</u> , 90:6340-6344 (1993).

Examiner Signature	<i>T. D. v</i>	Date Considered	01/13/04
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 BY APPLICANT

Date: September 18, 2000

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Applicant: CHOO, Yen

Appln. No.: New application 09/646,353

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FOREIGN PATENT DOCUMENTS

	Document Number	Date MM/YYYY	Country	Inventor Name	English Abstract		Translation Readily Available	
					Enclosed	No	Enclose	No
TLW	CR WO 96 06166	2/1996	WIPO	CHOO	—			
	DR WO 98 53057	11/1998	WIPO	CHOO	—			
	ER WO 98 53058	11/1998	WIPO	CHOO	—			
	FR WO 98 53059	11/1998	WIPO	CHOO	—			
	GR WO 98 53060	11/1998	WIPO	CHOO	—			
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OTHER (Including in this order: Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

TLW	IR	CHOO: "Recognition of DNA methylation by zinc fingers", nol 5, no4, April 1998 pgs 264-26 and XP002116419		
	JR	ISALAN et al" "Synergy between adjacent zinc fingers in sequence-specific DNA recognition: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, no 94, May 27m 1997 pgs 5617-5621 XP002075337 ISSN 002708424		
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	PR			
	QR			

Examiner T. Inoue

Date Considered: 7/27/02

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.